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Bunney et al.

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(54) **DETECTION OF HEADPHONE ROTATION**

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CPC ***H04R 1/1041*** (2013.01); ***G06F 3/165*** (2013.01); ***H04R 1/105*** (2013.01); ***H04R 1/1008*** (2013.01); *H04R 2420/07* (2013.01)

(58) **Field of Classification Search**
USPC 381/71.6, 74, 151, 309, 362, 367, 370, 381/376
See application file for complete search history.

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(57) **ABSTRACT**

Some embodiments of the disclosure provide systems and methods of detecting headphone rotation to properly process user input to the headphones. The systems and methods described herein may be used, for example, to detect a gesture (e.g., a swipe) received as user input on a touch interface of the headphones, such as a touch interface integrated into an ear piece. The gesture may be made in a particular direction, such as down toward Earth. However, headphones may be worn in a plurality of configurations, such as upright with the headband around the top of the head, downward with the headband around the back of the neck, or anywhere in between. Thus, the systems and methods described herein may be used to determine the rotation of the headphones in order to properly ascertain the intended gesture and perform an intended result.

19 Claims, 8 Drawing Sheets